

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1 (Canceled)

Claim 2 (Currently Amended): The automatic flowcharting method according to Claim [[1]] 12, said method further comprising the step of:

associating a first visual attribute to said processing operations in said first selected group and a second visual attribute to said processing operations in said second selected group.

Claim 3 (Original): The automatic flowcharting method according to Claim 2, wherein said first visual attribute is a first color.

Claim 4 (Previously Presented): The automatic flowcharting method according to Claim 2, wherein said second visual attribute is a second color.

Claim 5 (Currently Amended): The automatic flowcharting method according to Claim [[1]] 12, said analyzing step further comprising:

identifying a third group of processing operations that repeatedly appear in said data structure.

Claim 6 (Original): The automatic flowcharting method according to Claim 5, said analyzing step further comprising:

associating a third visual attribute to said processing operations in said third group.

Claim 7 (Original): The automatic flowcharting method according to Claim 6, wherein said third visual attribute is a third color.

Claim 8 (Canceled)

BEST AVAILABLE COPY

Claim 9 (Currently Amended): The automatic flowcharting method according to Claim [[8]] 12, said method further comprising a step of:

automatically exporting said processing operations and said decision operations for said multi-nodal process from a database into said input file.

Claim 10 - 11 (Canceled)

Claim 12 (Currently Amended): The An automatic flowcharting method for diagrammatically representing a multi-nodal process comprising processing operations and decision operations, said method comprising:

(a) reading an input file including data representing a multi-nodal process arranged as a plurality of records, each of said plurality of records including a first processing operation, a second processing operation and a decision operation;

(b) converting processing operations and decision operations of said multi-nodal process from said input file into a data structure;

(c) analyzing said data structure for identifying a first group of processing operations that appear once in said data structure, and for identifying a second group of processing operations that are associated with two or more decision operations in said data structure;

(d) traversing said data structure to generate an ordered sequence of processing operations for visual representation; and

(e) generating a diagrammatic representation of said ordered sequence including orienting successive processing operations in a vertical dimension and associating attributes to each processing operation of said processing operations according to their identified group while offsetting each successive processing operation in a horizontal dimension according to Claim 1; wherein said each successive processing operation is offset in said horizontal dimension relative to an immediate prior processing operation, and linking each processing operation of said second group to a further processing step of said processing operations according to a decision operation of said two or more decision operations,

wherein the linking of each processing operation of said second group includes aligning said processing operation to a further processing step in said vertical dimension.

Claim 13 (Currently Amended): The automatic flowcharting method according to Claim ~~[[1]]~~ 12, said method further comprising a step of:

writing an output file for said generated diagrammatic representation of said multi-nodal process.

Claim 14 (Original): The automatic flowcharting method according to Claim 13, wherein said output file is written in a markup language for presentation in a web-enabled browser.

Claim 15 (Original): The automatic flowcharting method according to Claim 14 wherein said output file is transmitted over a communications network.

Claim 16 (Original): The automatic flowcharting method according to Claim 15 wherein said communications network is one selected from the group comprising:

an Intranet, and
the Internet.

Claim 17 (Canceled)

Claim 18 (Currently Amended): The automatic flowcharting system according to Claim ~~17~~ 28, said server further including:

a mechanism for associating a first visual attribute of said processing operations in said first group and a second visual attribute to said processing operations in said second group.

Claim 19 (Original): The automatic flowcharting system according to Claim 18, wherein said first visual attribute is a first color.

Claim 20 (Original): The automatic flowcharting system according to Claim 18, wherein said second visual attribute is a second color.

Claim 21 (Currently Amended): The automatic flowcharting system according to Claim 17 28, said mechanism for analyzing further comprising:

a mechanism for identifying a third group of processing operations that repeatedly appear in said data structure.

Claim 22 (Original): The automatic flowcharting system according to Claim 21, said mechanism for analyzing further comprising:

a mechanism for associating a third visual attribute to said third group of processing operations.

Claim 23(Original): The automatic flowcharting system according to Claim 22, wherein said third visual attribute is a third color.

Claim 24 (Canceled)

Claim 25 (Currently Amended): The automatic flowcharting system according to Claim 24 28, said server further including:

a mechanism for automatically exporting said processing operations and said decision operations for said multi-nodal process from a database into said input file.

Claim 26 – 27 (Canceled).

Claim 28 (Currently Amended): The An automatic flowcharting system for diagrammatically representing a multi-nodal process comprising processing operations and decision operations in a client-server environment, said system comprising:

(a) a server interconnected via a communications network to a client, said server including:

(i) a mechanism for reading an input file including data representing a multi-nodal process arranged as a plurality of records, each of said plurality of records including a first processing operation, a second processing operation and a decision operation;

(ii) a mechanism for converting processing operations and decision operations of said multi-nodal process into a data structure;

(iii) a mechanism for analyzing said data structure for identifying a first group of processing operations that appear once in said data structure, and for identifying a second group of processing operations that are associated with two or more decision operations in said data structure; and

(iv) a mechanism for traversing said data structure to generate an ordered sequence of processing operations for visual representation;

(v) a mechanism for generating a diagrammatic representation of said ordered sequence including orienting said processing operations in a vertical dimension and associating attributes to each processing operation of said processing operations according to their identified group, said generating mechanism including according to Claim 17, ~~said mechanism for generating~~ further comprising: a mechanism for determining a horizontal indentation for each successive processing operation of said processing operations such that each successive processing operation is offset in a horizontal dimension relative to an immediate prior processing operation, and such that each processing operation of said second group is linked in vertical alignment with a further processing step of said processing operations according to a decision operation of said two or more decision operations; and

(b) said client for receiving said generated diagrammatic representation of said multi-nodal process via said communications network in a form for presentation by said client.

Claim 29 (Currently Amended): The automatic flowcharting system according to Claim 17 28, said server further including:

a mechanism for writing an output file of said generated diagrammatic representation of said multi-nodal process.

Claim 30 (Original): The automatic flowcharting system according to Claim 28, wherein said output file is written in a markup language for presentation in a web-enabled browser by said client.

Claim 31 (Original): The automatic flowcharting system according to Claim 30, wherein said output file is transmitted over said communications network.

Claim 32 (Original): The automatic flowcharting method according to Claim 31, wherein said communications network is one selected from the group comprising:

an Intranet, and
the Internet.

Claim 33 (canceled)

Claim 34 (Currently Amended): The program storage device according to Claim ~~33~~ 44, said method further comprising the step of:

associating a first visual attribute to said processing operations in said first group and a second visual attribute to said processing operations in said second group.

Claim 35 (Original): The program storage device according to Claim 34, wherein said first visual attribute is a first color.

Claim 36 (Original): The program storage device according to Claim 34, wherein said second visual attribute is a second color.

Claim 37 (Currently Amended): The program storage device according to Claim ~~33~~ 44, said analyzing step further comprising:

identifying a third group of processing operations that repeatedly appear in said data structure.

Claim 38 (Currently Amended): The program storage device according to Claim 37, said analyzing step further comprising:

associating a third visual attribute to said third group of processing operations.

Claim 39 (Original): The program storage device according to Claim 38, wherein said third

visual attribute is a third color

Claim 40 (canceled)

Claim 41 (Currently Amended): The program storage device according to Claim 40 ~~44~~, said method further comprising a step of:

automatically exporting said processing operations and said decision operations for said multi-nodal process from a database into said input file.

Claim 42 – 43 (Canceled)

Claim 44 (Currently Amended): The A program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform an automatic flowcharting method for diagrammatically representing a multi-nodal process comprising processing operations and decision operations, said method comprising:

(a) reading an input file including data representing a multi-nodal process arranged as a plurality of records, each of said plurality of records including a first processing operation, a second processing operation and a decision operation;

(b) converting processing operations and decision operations of said multi-nodal process from said input file into a data structure;

(c) analyzing said data structure for identifying a first group of processing operations that appear once in said data structure, and for identifying a second group of processing operations that are associated with two or more decision operations in said data structure;

(d) traversing said data structure to generate an ordered sequence of processing operations for visual representation; and

(e) generating a diagrammatic representation of said ordered sequence including orienting successive processing operations in a vertical dimension and associating attributes to each processing operation of said processing operations according to their identified group while offsetting each successive processing operation in a horizontal dimension according to Claim 33;
~~wherein said each successive processing operation is offset in said horizontal dimension relative~~

to an immediate prior processing operation, and linking each processing operation of said second group to a further processing step of said processing operations according to a decision operation of said two or more decision operations,

wherein the linking of each processing operation of said second group includes aligning said processing operation to a further processing step in said vertical dimension.

Claim 45 (Currently Amended): The program storage device according to Claim ~~33~~ 44, said method further comprising a step of:

writing an output file of said generated diagrammatic representation of said multi-nodal process.

Claim 46 (Original): The program storage device according to Claim 45, wherein said output file is written in a markup language for presentation in a web-enabled browser.

Claim 47 (Original): The program storage device according to Claim 46, wherein said output file is transmitted over a communications network.

Claim 48 (Original): The program storage device according to Claim 47, wherein said communications network is one selected from the group comprising:

an Intranet, and
the Internet.

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

- ☐ **BLACK BORDERS**
- ☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**
- ☐ **FADED TEXT OR DRAWING**
- ☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**
- ☐ **SKEWED/SLANTED IMAGES**
- ☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**
- ☐ **GRAY SCALE DOCUMENTS**
- ☒ **LINES OR MARKS ON ORIGINAL DOCUMENT**
- ☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**
- ☐ **OTHER:** _____

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.